

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: J.C. Jensen Inc.
176 Jensen Road
Lavina, MT 59046
2. Type of action: Application for Beneficial Water Use Permit 30028082-40A
3. Water source name: Musselshell River
4. Location affected by project: The point of diversion is located in NE NW SW, Section 5, T6N, R22E, Golden Valley County.
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

This permit application is for additional water from the Musselshell River to supplement irrigation from Deadmans Basin contract water and a sandpoint well system. The applicant is requesting to divert 2.97 cubic feet per second (CFS); up to a total volume of 175 acre-feet (AF) annually. The place of use is 137.7 acres in Section 33 T7N R22E. The water will be used to operate two center pivots to grow alfalfa and grain crops.

Previously this land had been irrigated using wheel lines. The source of water has been contract water purchased from Deadmans Basin Water Users' Association and a sandpoint well system consisting of 10 shallow wells. The applicant states that the sandpoint system has recently diminished in both quantity and quality of water. These two water sources will still be used to irrigate this land during the months of July and August; and other times when the junior priority date of the permit would not allow the permit to be exercised. Diversion could occur prior to May 1st; which is typically the first day contract water is available from Deadmans Basin.

The benefits to the applicant would include increased production due to earlier irrigation and also due to the ability to reserve contract water for use later in the irrigation season. During periods of abundant available water in the Musselshell River; additional benefits to all water users could result from diminished releases of the applicants' 185 AF of contract water from Deadmans Basin Reservoir. The excess water could be carried into the next irrigation season.

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

Dept. of Environmental Quality Website - TMDL 303d listing
MT. National Heritage Program Website - Species of Concern
USDI Fish & Wildlife Service Website - Endangered and Threatened Species Golden Valley County, MT
MT State Historic Preservation Office - Archeological/Historical Sites
USDA Natural Resources Conservation Service – Web Soil Survey
USDI Fish & Wildlife Service – Wetlands Online Mapper

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity - *Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: Minor to moderate impact.

Water quantity will be diminished by up to 175 AF in some years. The Musselshell River has been identified as chronically dewatered and has been closed to new appropriations from July 1 through September 30 by administrative rule. Only supplemental irrigation applications will be accepted for consumptive use during periods of use from September 1 through September 30. Applicant has not applied to divert water during the closure period with the exception of supplemental irrigation from September 1- September 30. Contract water from Deadmans Basin could be used during the closure period of July and August. Montana Department of Fish, Wildlife & Parks (FWP) has an instream flow reservation of 80 CFS from the confluence of the North and South Forks of the Musselshell River to the Musselshell Diversion Dam at the town of Musselshell. The conditions named in Part II, Section 3 of this document are designed to limit diversion to times when water is available in excess of the legal demand. The 1998 Musselshell River Basin Water Management Study indicates that in at least five out of ten years a total in excess of 79,505 AF is available on average for appropriation during the April 1 through June 30 and September 1 through October 31 periods at the Roundup USGS gauge, just downstream of this project. The depletion of 175 AF from this total during average years could have a minimal to moderate impact to water quantity. The study indicates that on average during the month of September water was available in only 4 of the 61 years of record. October fairs slightly better; water has been available in 37 of the 61 years of record. According to the study; of the months that new water appropriations are allowed on the Musselshell, September and October are the two with the least available water.

Water quality - *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: Minor impact.

The reach of the Musselshell River from Deadmans Basin Diversion Canal to the hydrologic basin line just southwest of Roundup has been designated as needing a TMDL plan. The 2006 303d listing identifies impairments of aquatic life support & warm water fishery probably caused by low flow alterations, riparian degradation and other habitat modifications. This application would have a minor impact to flow alteration due to the increased depletion of 175 acre-feet. The conditions noted in Part II, Section 3 of this document would greatly limit the impact to the already impaired conditions due to flow alteration.

Groundwater - *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: Low likelihood of impact.

The localized groundwater table may increase earlier in the spring due to earlier irrigation. Base flows in the Musselshell River may slightly increase later in the year due to the return flows associated with this early irrigation.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: Low likelihood of impact.

It's unlikely that the project will have any impacts related to the diversion works as the electric 100 HP pump is already in place and has been previously operated to supply contract and sandpoint well water to the two center pivots.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: Low likelihood of impact.

The Montana National Heritage Program lists 6 species as Species of Concern within Township 7 North Range 22 East (4 birds, 1 amphibian, 1 vascular plant). Common names for the four bird species are the Greater Sage-grouse, Loggerhead Shrike, Sage Thrasher, & Brewers Sparrow. The common name for the amphibian is the Plains Spadefoot Toad and the vascular plant is called the Little Indian Breadroot. The USDI Fish & Wildlife Service Website shows that Golden Valley County has one species listed as threatened; the Bald Eagle and one species listed as endangered: the Black-footed Ferret. The land is already irrigated cropland and therefore no displacement of endangered or threatened species is anticipated. The pump and supply system are in place and consistent with other agriculture type developments commonly found in the area.

Wetlands - Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.

Determination: Low likelihood of impact.

There are no known wetlands associated with this application. The USDI Fish & Wildlife Service – Wetlands Online Mapper has no data available for the project location.

Ponds - For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.

Determination: Low likelihood of impact.

The project does not involve nor impact any ponds.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.

Determination: Low likelihood of impact.

The USDA-NRCS Web Soil Survey indicates the dominant soil unit in the area is the Kobase-Zatoville silty clay loam. Soil description says this soil is not prime farmland. The sodium adsorption ratio for this soil type is 2.2 signifying a low likelihood of impacts from saline seep. Soil Moisture content may increase earlier in the season due to earlier irrigation.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.

Determination: Low likelihood of impact.

The project would result in increased forage production. No spread of noxious weeds would likely be associated with this application. Normal farm weed management would be used to control noxious weeds potentially invading disturbed areas. It is the responsibility of the property owner to control noxious weeds on their property.

AIR QUALITY - Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.

Determination: Low likelihood of impact.

It is unlikely air quality would be impacted; as this project will utilize an existing 100 HP electric pump.

HISTORICAL AND ARCHEOLOGICAL SITES - Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.

Determination: Low likelihood of impact.

The State Historic Preservation Office believes that because this field has been previously farmed, there is a low likelihood cultural properties will be impacted; a cultural resource inventory is unwarranted at this time.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: Low likelihood of impact.

No additional impacts are anticipated.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: Low likelihood of impact.

The proposed action is consistent with historic agricultural practices in the area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: Low likelihood of impact.

The proposed action will not impact recreational activities in the area.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: Low likelihood of impact.

No impacts to human health have been identified.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*

Yes___ No_X__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: No known impacts.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

- (a) Cultural uniqueness and diversity? **None**
- (b) Local and state tax base and tax revenues? **None**
- (c) Existing land uses? **None**
- (d) Quantity and distribution of employment? **None**
- (e) Distribution and density of population and housing? **None**
- (f) Demands for government services? **None**
- (g) Industrial and commercial activity? **None**
- (h) Utilities? **None**
- (i) Transportation? **None**
- (j) Safety? **None**
- (k) Other appropriate social and economic circumstances? **None**

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts - No secondary impacts are anticipated.

Cumulative Impacts - Since the closure of the Musselshell River to new appropriations in 1992 only 12 new water rights have been issued. Given that the period of appropriation is limited, few applications are received and even fewer water rights granted. While development may continue to a limited degree, the economic implications of less than full-service irrigation make the cumulative impacts of continued development minor.

3. *Describe any mitigation/stipulation measures:*

Conditions for minimum stream flows are generally imposed on new applications in order to reduce impacts during low-flow periods.

The following condition is necessary to prove the criteria in MCA 85-2-311:

****Important Information**

The appropriator shall divert water during the period of appropriation only when the flow rates at USGS Gauging Station No. 06126500 (Musselshell River near Roundup MT) indicates a flow in excess of 80 cubic feet per second. These flows must be checked daily when appropriating water. The current internet address is: <http://mt.waterdata.usgs.gov/nwis/current?type=flow>

The following condition is needed because ARM 36.13.601 requires measuring devices for all diversions from the Musselshell River.

****Water Measurement Records Required**

The appropriator shall install a department approved in-line flow meter at a point in the delivery line approved by the department. Water must not be diverted until the required measuring device is in place and operating. On a form provided by the department, the appropriator shall keep a written daily record of the flow rate and volume of all water diverted, including the period of time. Records shall be submitted by November 30 of each year and upon request at other times during the year. Failure to submit reports may be cause for revocation of a permit or change. The records must be sent to the water resources regional office. The appropriator shall maintain the measuring device so it always operates properly and measures flow rate and volume accurately.

Lewistown - ph: 406-538-7459 fax: 406-538-7089

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*

No action alternative: Deny the application. This alternative would result in none of the benefits of increased forage production and the related economic benefits being realized by the applicant. No other impacts would likely occur, as operation of the project would continue in the same manner as in the past.

PART III. Conclusion

1. *Preferred Alternative*

The preferred alternative is the proposed alternative, but only if the recommended conditions are included on the permit.

2 *Comments and Responses*

None Received.

3. *Finding:*

Yes___ No X Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

None of the identified impacts for any of the alternatives are significant as defined in ARM 36.2.524.

Name of person(s) responsible for preparation of EA:

Name: Douglas Mann

Title: Water Resources Specialist - LRO

Date: 4/7/2008